

# W5YI

America's Oldest Ham Radio Newsletter

## REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable.

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## **FCC to Reorganize by Function. To add new Enforcement Bureau**

In 1995, the FCC was completely restructured. The Private Radio Bureau became the Wireless Telecommunications Bureau; the Field Office Bureau became the Compliance and Information Bureau ...and so forth. But "Creating an FCC for the Information Age" did not anticipate that telecommunications services would cross industry boundaries. Now they are going to do it all over again! The bottom line is that the times and technology are changing ...and the FCC must change with it.

The objective of the new plan is to consolidate tasks that are spread among several bureaus. The FCC believes the planned restructuring along functional lines will better allow the Commission to oversee converging markets and the emergence of new technologies.

In a speech presented October 1<sup>st</sup> at the Georgetown University Law Center, FCC Chairman, Bill Kennard told about how the FCC would be preparing to face the challenges of competition, digitization and convergence of telecommunications. He also announced three new initiatives, a new enforcement division, a new public information department and the creation of an advisory committee of leading technologists.

Kennard said he believed the FCC had six key responsibilities:

- 1.) Eliminate bottlenecks and maintain a competitive market.
- 2.) Deregulate communications services when

competition exists.

- 3.) Protect consumers from unscrupulous service providers.
- 4.) Promote efficient use of the radio spectrum "...and those who are licensed to use it can do so free of unwarranted interference."
- 5.) Strengthening the community. Communications services should be widespread, tie the community together and help build a stronger, more prosperous, and safer world with greater opportunity. "...ensuring that the 54 million Americans with disabilities have access to the tools of the telecommunications revolution."
- 5.) Advance our principles world-wide. "The communications industry is truly global today"

"We must change while moving forward at top speed," Kennard said. "It's like redesigning a fully-loaded 747 while still in the air. ...In order to meet this challenge, I brought in Dale Hatfield as our Chief Technologist who is now overseeing our *Office of Engineering and Technology* which contains some of the best spectrum engineers in the world." (Hatfield is also a ham operator, his call sign: W0IFO.)

A *Technical Advisory Committee*, headed by Dale Hatfield, which will include members from industry, academia, and government, will provide technical advice to the Commission on innovation in the communications industry.

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Kennard mentioned that the FCC is "...investing in new technology to do our job faster, cheaper, and in a more consumer friendly way with new processes ...such as electronic filing and the Wireless Telecommunication's Bureau's *Universal Licensing System*."

"With Universal Wireless licensing we have fundamentally changed the way the commission receives and processes wireless applications. It collapses 40 forms into four; allows licensees to modify online only those portions of the license that need to be modified without resubmitting a new application; advises you when you have filled out the form improperly by immediately notifying you electronically; and has allowed us to save the public over 700,000 hours of paperwork for FCC filings in the next fiscal year alone."

"New technology and processes are not enough for a 21<sup>st</sup> century FCC," Kennard said. He mentioned that the *Communications Act* was actually several statutes cobbled together. "...fundamentally, we're living with a law dating back to as early as 1887."

"When wireless carriers compete with wireline carriers, when cable companies provide telephone service, when broadcasters transmit data, when you can use fixed microwave licenses to transmit video or data, and when you can make a local telephone call via a satellite, the world has changed. Over time, we are going to have to change, too," he said.

"We need to reorganize ourselves along the functional lines that make more sense in a world in which consumers and service providers no longer see distinct markets organized along traditional industry boundaries." He said the "Bureau and Office structure makes little sense in an era of convergence" and the Commission must reorganize itself along functional lines.

Kennard announced the formation of two new bureaus, an Enforcement Bureau to "...provide swift and effective enforcement..." and a Public Information Bureau which would "...provide consumers with information about their rights in a competitive environment."

"We're granting more licenses, we are authorizing more service, and having to approve more major mergers than any Commission in history. We are also confronted with consumer complaints such as cramming, slamming, and protecting information about consumers. And we are doing this with no additional staff and a real reduction in our budget. In reality, we are doing more with less."

The bulk of the FCC's planned reorganization will be delayed until next year, after the agency completes their move to their new "Portals II" headquarters in southwest Washington, D.C. which is just now getting underway. The Commission also must obtain approval from its union and Congress before conducting a massive reorganization.

## VECs ASK FOR FEWER AMATEUR SERVICE LICENSE CLASSES; 5 WPM TOP CODE SPEED

The *National Conference of VECs* agree with the FCC's assessment that the role of Morse code in modern communications is decreasing. The fourteen Volunteer Examiner Coordinators (VECs) act as the administrative liaison (or coordinator) between the Federal Communications Commission who grant Amateur Service licenses and the volunteer examiners (VEs) who prepare and administer the required license examinations in the Amateur Service.

By majority vote, the VEC's filed formal comments on October 1st which look toward a restructured Amateur Service containing a total of three license classes conferred by only four license examinations. They would correspond to the Technician, General and Amateur Extra Class.

The VECs said "The current system of six Amateur Service license classes and eight different examinations is excessively complex. ...There can be no doubt that the U.S. Amateur licensing system with its excessive license classes, written and telegraphy examinations and various versions of the same license is the most complicated of any Amateur Service in the world."

The VECs believe the Technician Plus Class should be abolished and agreed with the Commission's proposal to renew existing Technician Plus licenses as "Technician." Licensees would, however, retain credit for the 5 words-per-minute Morse code examination.

Both the FCC and the ARRL proposed to reduce the number of license classes from six to four. The VECs said "...considering the primary difference between the current Advanced and Amateur Extra Class operator licenses is the 20 words-per-minute code examination which yields very limited additional privileges, we feel a further streamlining of the number of license classes can be realized."

The VECs proposal would phase out the Advanced Class as well as the Novice. Those classes could be indefinitely renewed or modified, but no new Novice and Advanced Class licenses would be granted. Five words-per-minute would be the highest Morse code speed required. A feature of the proposal is that no amateurs would lose privileges.

The VECs envision that the Technician Class license examination would contain 50 questions based on the combined Element 2 and 3(A) question pools. The privileges would be the same as the existing Technician Class. The General Class license would also contain 50 questions from the current Element 3(B) question pool with a 5 word-per-minute Morse code examination. The Extra Class license exam is proposed to be 100 questions which would be constructed from the current Element 4(A) and 4(B) pools. This new written examination would be known as Element 4. There



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would be no further Morse code examination. The number of the General and Extra Class written examination questions would be increased somewhat to compensate for reduced code speed.

## QUESTIONS IN WRITTEN AMATEUR EXAMINATIONS

License Class	Present Number	Proposed Number
Technician	65 questions*	50 questions
General	30 questions	50 questions
Extra	90 questions**	100 questions
<b>TOTAL:</b>	<b>185 questions</b>	<b>200 questions</b>

\* There are 35 questions in Element 2, 30 in Elem. 3(B).

\*\*There are 50 questions in Elem. 4(A), 40 in Elem. 4(B).

The VECs proposed that the Amateur Service qualifications for the various license classes be as follows:

**EXTRA CLASS:** Requires passing or credit for: Elements 1(A), 3(A), 3(B) and 4.

Examination: Element content

Written Element 4 consists of 100 primarily technical multiple choice questions taken from the existing but combined Element 4(A) and 4(B) question pools.

Telegraphy Element 1(A), 5 WPM

Privileges: Current Extra Class frequency privileges (No change over existing privileges.)

Upgrade path: Current Advanced Class amateurs need pass new Element 4 to upgrade to the Amateur Extra Class. Current Advanced Class amateurs could modify and renew their licenses indefinitely, but no new Advanced Class licenses would be issued.

Call Signs: Sequential - Group A, then Group B  
Vanity: - Group A, B, C or D.

**GENERAL:** Requires passing or credit for: Element 1(A), 3(A) and 3(B).

Examination: Element content

Written Element 3(B) consists of 50 primarily HF-oriented multiple-choice questions taken from the existing Element 3(B) question pool. (No change except for 50 questions instead of 30.)

Telegraphy Element 1(A), 5 WPM

Privileges: Current General Class frequency privileges (No change over existing privileges although FCC may wish to consider giving Advanced phone spectrum

to the General Class.)

Upgrade path: Current Novice operators would have to pass written Elements 3(A) and 3(B) to upgrade to the General Class. Technician (without Element 3(B) credit) would need to pass Element 1(A) and 3(B). Tech Plus Class amateurs need pass only Element 3(B) to upgrade to the General Class. Current Novice Class amateurs could modify and renew their licenses indefinitely, but no new Novice Class licenses would be issued. Technician Plus licenses would be renewed as Technician Class but would retain 5 WPM telegraphy examination credit indefinitely.

Call Signs: Sequential - Group C, then Group D.  
Vanity - Group C or D

**TECHNICIAN:** Requires passing: Element 3(A)

Examination: Element content

Written New Element 3(A) consists of 50 primarily VHF/UHF-oriented multiple-choice questions taken from the existing combined Element 2 and 3(A) question pools.

Telegraphy None

Upgrade path: Current Novice operators would have to pass written Elements 3(A) to upgrade to the Technician Class.

Privileges: All amateur bands above 30 MHz (i.e. 6 meters and higher) (No change over existing privileges.)

Call Signs: Sequential - Group C, then Group D  
Vanity - Group C or D

A single five words-per-minute telegraphy examination meets the international treaty requirement and would eliminate the need to grant medical credit to disabled amateurs for the higher code speed examinations. The VECs said "We see no justification for 13 and 20 words-per-minute code testing ...or 12 WPM as suggested by the American Radio Relay League." The ARRL-VEC asked to be excluded from participation in the NCVCC comments since the League will be filing their own proposal.

Over the past fifteen years, more than one million applicants have been examined by the VEC System. A copy of the 35-page VEC filing can be found by searching the FCC's Electronic Comment Filing System on the World Wide Web at <<http://www.fcc.gov/e-file/ecfs.html>> and entering the proceeding number 98-143.



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## CUTTING EDGE TECHNOLOGY

■ **In an effort to get faster Internet access for residential customers** the FCC has proposed abolishing the requirement that the Baby Bell telephone operating companies must lease high-speed Internet connections to competitors. It is expected that the ruling will motivate phone companies to offer high bandwidth capacity to home users at competitive prices. Under the plan, phone companies would be required to offer high speed connections through separate subsidiaries. Regulatory incentives for satellite, cable and wireless providers to enter the local-access market are also under discussion..

■ **It appears, however, that most high speed Internet connections to the home will be by cable.** "At Home", Tele-Communications, Inc. (TCI) cable modem service now has about 200,000 subscribers - 150,000 more than it had at the end of 1997. Motorola has already shipped 170,000 cable modems and plans to sell around 320,000 this year. There will be about 500,000 cable modem subscribers by year's end. By sharp contrast, a research firm says there will only be 25,000 customers using ASDL by the end of 1998. ASDL technology turns twisted pair copper telephone wires into high speed data lines. It operates at speeds ranging from 256 kbs to 1.5 megabits per second whereas a cable modem can deliver downstream data at 768 kbs to 10 mbps. And Internet access over cable is cheaper — about \$40.00 a month. (Current ASDL service is selling for \$59.95 to \$89.95.)

AT&T recently paid \$37.3 billion for Tele-Communications, Inc. and plans to convert the cable company's one-way video lines into two-way voice, data and video services over TCI's coaxial-cable network. The new system will employ Internet protocol or IP. Customers will simply plug their telephones, televisions and computers into a telecom box.

■ **A couple of years ago, one-hour photo finishers were taking the nation by storm.** Now it is home-operated table-top digital photo printers. Instead of ink jets, these printers use a new method called dye-sublimation. You can buy them for \$300 to \$500. Supplies (special paper and dye-sublimation ribbons or cartridges), however, are not cheap. Some

photo printers bypass your computer and hook right to the digital camera. As time goes by, cost of printers and supplies will come down.

■ **Telephones keep getting smaller! A 2-ounce wristwatch telephone called "Swatch Talk" has been developed in Switzerland.** It will be charged and re-charged overnight by induction. One charge gives 2-3 days of standby time and 3-4 hours of talk time. The \$350 watch comes equipped with a loudspeaker and a microphone. The wrist phone will introduced in Europe next year.

## ELECTRONICS IN THE NEWS

■ **Cuba cracks down on electricity fraud.** A Reuters dispatch out of Havana reports that the Cuban Government has caught tens of thousands of electricity customers slowing down and otherwise altering their meters. In some cases, electricity inspectors have been bribed to help them. Cubans say such measures are necessary to survive.

## COMPUTERS AND SOFTWARE

■ **Intel and Netscape have invested in privately held Red Hat Software, a company that supports "Linux" — a free PC operating system available over the Internet.** Microsoft has taken note and is carefully watching Linux's growth. Intel's action could widen the rift between the two. The Linux operating system has about 8 million users worldwide.

■ **Packard-Bell NEC, Inc., (Sacramento, CA) will pay the federal government \$3.5 million to settle a suit** that charged the company with selling computers that contained recycled (used) parts. It all started when a former employee "blew the whistle". At issue was a contract Packard Bell had to supply Navy base exchanges with PCs. Under the "whistleblower" provisions, the ex-employee is entitled to a portion of the \$3.5 million settlement. Japan's NEC now owns the majority of Packard-Bell.

■ **Look for Microsoft to produce and market consumer hardware that interfaces with the PC.** Their first will be a new 900-MHz cordless "Microsoft PC Phone" product which allows users to uti-

lize the power of their computer to develop new functions using software already built into the Windows 95/98 operating system. Purchasers will be able to design custom voice-mail options, caller-ID capability and voice recognition features. A built-in speaker announces the name of the caller before the phone is answered. And you can even program the phone to give a specific caller a customized greeting. Cost will be around \$200.

## INTERNET NEWS

■ **The online gambling industry is enjoying explosive growth.** There are now more than 200 Internet wagering sites that let Internet surfers bet on casino games, sports, horse races and bingo. There were only 15 in January 1997. Some sites share the same back office operation. Although a few Internet gambling sites have been accused of questionable practices, most seem to operate above board. About 22 nations allow Internet gambling, mostly in the Caribbean and Central America. It is expected, however, that Australian and West Europe will eventually dominate the industry.

■ **Motorola has unveiled a new interactive broadcast radio service over the Internet.** Their two-way RadioWave.com service will enable listeners to send information back and forth to the radio station in real time. Listeners need to download the player/tuner to see the associated video and to activate the interactive features. Motorola also has an investment in Broadcast.com, another Internet radio broadcaster. Hundreds of AM/FM radio station are already broadcasting to PCs over the Web. RadioWave will operate as a subsidiary of Motorola.

■ **Cable-TV model is coming to the Internet!** ChannelSpace Entertainment (Norfolk, VA) has teamed up with several online companies (including America Online and Broadcast.com) to bring video channels to the Internet. Currently, consumers are forced to wade through huge portal sites to get dribs and drabs of information on topics near and dear to them. ChannelSpace channels will offer a more complete, "one-stop shopping" solution for tightly defined areas of interest. Viewers will be able to watch specific programs on demand. A web surfer logs simply logs into the Channelspace site and selects a



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channel topic. The service will be advertising supported. At first the video quality will be less than broadcast quality. But this will improve as bandwidth limitations are overcome. See: [www.channelspace.com](http://www.channelspace.com) The site is just now getting going — having launched on September 28<sup>th</sup>.

■ **As online home buyer information expands**, realtors are losing their monopoly power in the residential housing market! A University of North Texas research report says that new technologies will eventually reduce the number of people involved in a home purchase by 75%. Fifteen percent of all home buyers now use the Internet to look for housing. The UNT study says that with the help of the Internet, time and fees paid to real estate agents and other service providers will be cut in half.

■ **The Internet is also cutting deeply into commissions earned by travel agents and stock brokers.** Be sure to check out the airline websites before booking a ticket. Continental Airlines gives you a \$20.00 discount for buying over the Internet. And almost every airline offers online discounts, "free miles" or e-mail subscription services.

■ **On-line (only) checking/savings bank launches** — The Federal Deposit Insurance Corporation (FDIC) has approved CompuBank (Houston, TX) as the first totally virtual national bank. You mail deposits to a post office box. Customers can access their accounts, conduct bill payments, account transfers, retrieve check images or statements, 7 days a week, 24 hours a day. While several banks offer on-line banking in conjunction with traditional service, CompuBank representatives are available by telephone only. The bank has no customer accessible headquarters or branch offices. Protection against unauthorized online transactions is provided by the Travelers Casualty (Insurance) Corp. <<http://www.compupbank.com>>

■ As a result of test marketing in four states, **General Motors announced last week that they are planning to launch a national online shopping service** next Spring. But the dealer will still be in the picture. Their service gives consumers direct access to their car inventories. 'GM is acutely aware that online Auto-by-Tel <<http://www.autobytel.com>> generates more than \$500 million a month by simply helping people cyber-search for cars and trucks. The firm expects to process

1.5 million requests for cars this year!

■ **Internet telephone carriers, such as ICG NetCom and Qwest Communications, are sinking millions** into developing telephone service over the Internet. So far, however, the quality and reliability is not the best. Two new Swedish companies share patents on a new Internet telephony protocol called the Dynamic Transfer Mode. DTM, originally developed by Ericsson Telecom and the Swedish Royal Institute of Technology, permits the existing Internet infrastructure to handle voice traffic as reliably and with the quality of the public switched telephone network. ICG NetCom charges 5.9 cents per minute for Internet phone calls. DTM could lower international calling rates to 2 cents per minute.

■ **Just how big is the "mushroom cloud" we call the Internet?** Research firms are trying to figure it out and there are all sorts of estimates. One unanswered question is how do you measure it? By domain names, computers, sites ...traffic?

➤ Since 1985 when the first domain name was registered, there are now 4 million domain names which continue to grow by 60,000 per week.

➤ There are 30 million computers connected to the web, up from 30,000 in 1987.

➤ AltaVista (search engine) currently has 1.2 million web sites in its database. A British networking consultant, however, has found 2.6 million sites which are "growing by a factor of 100% per year."

➤ AltaVista believes the web consists of between 500 million to one billion pages.

➤ Web traffic is about 133 times what it was just 3 years ago and is currently running at about 4 petabytes (15 zeros) per month.

The bottom line is that no one knows, but it is "really big" as Ed Sullivan used to say. (Adapted from: *Cybertimes*, *New York Times*.)

## WASHINGTON WHISPERS

■ **It seems that the local telephone companies badly want to offer long distance service and vice versa.** But the FCC is closely watching how this develops.

AT&T plans to bypass the local telephone wiring infrastructure established by the Bell Telephone companies by buying Tele-Communications, Inc. AT&T will

then provide local service over cable-TV wiring. TCI is the nation's largest cable operator.

Two Bell operating companies (U.S. West and Ameritech) had planned to offer long distance service from Denver-based Qwest Communications. The local telcos would market the service, but would not offer it as their own. But federal regulators say, "No!" Local phone companies are precluded from offering long distance service until they open their local markets to competition.

■ **U.S. Senate says "No!" to Internet taxes.** A bill sponsored by Sen. Dale Bumpers (D-Ark.) to force mail order and Internet businesses to tax cyberspace sales has failed. By a vote of 65-30, the Senators voted to kill an amendment authorizing any state to require companies with significant catalog, mail order or Internet sales to collect their sales tax and send it back to the state. Opponents agreed that the legislation was in reality a hidden tax. Taxes on remote sales had been backed by governors, mayors and local municipalities. According to the *National Governors' Association*, states are losing \$4 billion a year because of mail order sales on the Internet.

■ In a separate bill called the *Internet Tax Freedom Act*, the Senate voted (on October 8<sup>th</sup>) to suspend new local and state taxes on the Internet for three years. The 96-2 vote imposes a three year moratorium on new taxes on Internet access, "bit" taxes and taxes on electronic commerce. The bill is similar to one already passed by the U.S. House of Representatives. It is expected to be signed by the President. We cannot allow the 30,000 state and local jurisdictions to stifle the Internet, nor can we allow the erosion of the revenue that state and local governments need to fight crime and invest in education," Clinton said.

The bill had the *Government Paperwork Elimination Act* tied to it. It requires the government to make all its forms available for execution online. It would also give digital signatures the same legal status as hand-written ones.

■ Internet provides 445-page royalty free "book." According to a Beijing newspaper, *China's Press and Publication Administration have seized a Chinese version of the Starr report characterizing it as a pornographic publication.* The report was picked up from the Internet, translated and rushed into print after



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being published by the U.S. Government. Several publishing houses have printed the "book" even though it has been outlawed in China as an "illicit publication." Tabloids there report that Monica Lewinsky was sent to the United States as an infant by the former Soviet KGB to try to entrap the U.S. President.

■ **A federal judge has given a religious pirate broadcaster until October 30<sup>th</sup> to obtain an FCC waiver or to leave the airwaves.** Unlicensed gospel "Prayze" radio operates on 105.3 FM from Bloomfield, CT. The station has been on the air for nearly two years. The station's attorney said it plans to appeal to a higher court if Prayze FM is not granted "experimental station" status. And after repeated warnings, the FCC on September 23<sup>rd</sup> - with the help of U.S. Marshals - closed down "Free Radio Memphis" that had been broadcasting on 94.7 MHz..

■ **An interesting newspaper article appeared in the Los Angeles Daily News last week entitled "The Internet Redefines Radio."** It tells how Paige Jarrett intends to move her pirate 40-watt radio station (KBLT-FM) to the Internet. "Cybercasting" without a license over the Internet is legal.

The number of on-air radio stations now online has skyrocketed in the past year from fewer than 100 to nearly 2,000, according to one recent estimate.

The secret is computer software that "streams" a highly compressed audio signal over the Internet, initially storing several seconds of audio in a buffer, then downloading more as it begins playing. That tactic smooths out the hiccups in transmission that could otherwise interrupt a cybercast. Sound quality depends on a listener's computer audio system and Internet connection, but normally at least rivals FM broadcasts.

■ **Microbroadcasters carrying bull horns and signs march on Washington** — A group of about 50 pirate radio broadcasters converged on Washington DC October 5<sup>th</sup> to protest the closing of nearly 300 low-powered "community" stations during the past two years. After demonstrating outside FCC headquarters, the protestors marched to the Washington DC headquarters of the *National Association of Broadcasters* where they tore down the NAB flag and hosted up the skull and crossbones, commonly referred to as the "Jolly Roger." The guilty parties were released by police when the NAB declined

to press charges.

■ **Local jurisdiction of video reception antennas pre-empted.** The FCC ruled (on September 25<sup>th</sup>) that local governments and homeowner associations can not prohibit the installation of satellite dishes and wireless cable antennas on property that the occupant owns or rents. The FCC is also expected to add language that applies to apartment, condo and rental housing landlords shortly. The federal pre-emption concerns television reception and does not include amateur radio antennas..

■ **Oral arguments set for RF Safety Rules** - After months of delay, oral arguments are set in the U.S. Court of Appeals, 2<sup>nd</sup> circuit, New York City for the week of Dec. 14 on legal challenges to radio-frequency radiation exposure guidelines adopted by the FCC in late 1996. The case was originally scheduled for August.

Though the new RF standards are stricter than the previous one, a coalition of environmentalist, workers and individuals argue the guidelines still do not protect consumers adequately. In addition, the groups claim the 1996 RF standard conflicts with laws governing disabled citizens, the environment and state rights.

The FCC says the 1996 RF standard included input from the Food and Drug Administration, the Environmental Protection Agency, the Occupational Safety and Health Administration and the National Institute for Occupational Safety and Health.

The 1996 FCC ruling incorporated elements of the RF standard adopted by the Institute of Electrical and Electronics Engineers and American National Standards Institute in 1992 and RF guidelines issued by the National Council on Radiation in 1986.

The RF health controversy was sparked by a Florida man who claimed in a lawsuit five years ago that his wife's fatal brain cancer was caused by her cellular phone. The court ruled against H. David Reynard in that case and no court to date has found any carrier or manufacturer liable for damages in a handful of health-related lawsuits.

Still, there is uncertainty about the safety of mobile phones. The World Health Organization and individual countries, meanwhile, are probing whether mobile phones contribute to cancer or other illnesses. (Thanks, RCRI)

## AMATEUR RADIO

■ **New German Government considered "...anti-technological."** Our German correspondent tells us that the recent parliamentary elections in Germany could have an adverse impact on Amateur Radio. The Liberal Christian Democrats (and Helmut Kohl) have been replaced with a coalition of Social Democrats called the "Green party." The new chancellor is Gerhard Schroeder. The Green party is on record as opposing the placement of some cellular phone sites and antennas because of the electromagnetic radiation danger caused by the 6-watt transmitters being placed a few hundred feet away from occupied buildings. The Green party also wants the U.S.-owned Radio Free Europe transmitters at Holzkirchen, Germany, and nuclear power plants turned off because they believe they cause mad cow disease. Our contact said that German radio amateurs are very concerned that if a 6-watt transmitter 200-feet away is considered to be a health hazard, what about an amateur radio transmitter running several hundred watts located in a residential setting?

■ **Nearly 20,000 U.S. amateurs radio operators did NOT renew their licenses** in the eight month period between January 1 and September 1, 1998. That means that so far this year, 38% of all amateurs eligible to renew their tickets either do not do so, or are deceased. (There were 19,935 non-renewals out of 52, 417 shown in the FCC records as being eligible.) The break-down by license class:

Novice	5524
Technician	4
Tech Plus	5345
General	4607
Advanced	3294
Extra	1183

This information was gathered by accessing the FCC Amateur Service database.

■ **Were you on the air on August 27<sup>th</sup>?** Scientists have requested input from radio amateurs following a rare astronomical event. A gamma ray burst occurred at 1022 UTC on the 27<sup>th</sup> of August from a neutron star 15,000 light years away. Experimental physics VLF monitoring circuits maintained by Stanford University recorded absorption down to tens of kilohertz and scientists believe



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there was an almost total blackout on medium wave and on frequencies up to 40m, for several minutes or longer. Paul Harden, N4SN, of the National Radio Astronomy Observatory at Socorro, New Mexico, has requested data from any amateurs who were lucky enough to be on the air during this rare occurrence.

■ According to a Memorandum and Order released October 6<sup>th</sup>, the FCC has refused to release all documents under the Freedom of Information Act (FOIA) concerning Jim Peng, owner of Ranger Electronics and Ranger Communications. These companies and others in Mr. Peng's control manufacture, import, and distribute electronic equipment. In a criminal action brought in United States District Court, Mr. Peng, Ranger Electronics, and Ranger Communications were charged with importing illegal transceiver radios that operated on citizen band frequencies, money laundering, and international money laundering. After the trial had commenced, Ranger Electronic reached an agreement with the United States whereby Ranger Electronics/Communications pled guilty to international money laundering and "no contest" to importing illegal transceivers into the United States. Criminal charges were dismissed against Ranger Electronic and Mr. Peng. Ranger Communications forfeited \$990,000 to the United States Customs Service.

The FCC refused to release all records relating to claims that amateur radios manufactured or sold by other companies "are easily modifiable to transmit on frequencies other than those assigned for use by Amateur operators." The Bureau released 204 pages of records to the requesters, but withheld two documents. The Bureau withheld the documents because they related to an ongoing enforcement proceeding.

■ On October 6<sup>th</sup>, the FCC again denied the amateur license renewal of Herbert L. Schoenbohm, KV4FZ of Kingshill, U.S. Virgin Islands. This latest decision upholds a previous ruling by an Administrative Law Judge. Schoenbohm had been found guilty in 1992 of illegally accessing the public switched telephone network to avoid paying toll charges. The Commission said that KV4FZ had not been truthful in his testimony about the incident and that his behavior warranted non-renewal of his ham radio licenses. Schoenbohm's license expired three years ago, but he has been permitted to operate

on the ham bands pending resolution of all appeals.

■ Meeting in Venezuela, the Administrative Council of the International Amateur Radio Union (IARU) agreed that there should be no reduction in the current minimum international qualifications for an Amateur Radio license. It did suggest, however, that the technical and operational qualifications for an amateur license be a "mandatory Recommendation" rather than a regulation. It is unclear exactly what the difference is between a mandatory recommendation and a law. ("mandatory" means "required" or "compulsory" according to our dictionary.) The ARRL's Executive Vice President David Sumner, K1ZZ version is that "Recommendations can be reviewed and revised more regularly than the Radio Regulations themselves." The Administrative Council's next meeting will be held in Lillehammer, Norway, starting September 26, 1999. A copy of the official news release from the IARU Administrative Council meeting is available online at: <http://www.iaru.org/rel981005.html>.

■ AMSAT-NA President Bill Tynan, W3XO, announced his retirement from office during the AMSAT-NA Annual Meeting held October 15-19 in Vicksburg, Mississippi. Tynan has recommended that Executive Vice President Keith Baker, KB1SF, be appointed to replace him. W3XO will continue serving on the AMSAT-NA Board and intends to remain active in AMSAT.

■ Former ARRL Director, Thomas W. Comstock, N5TC (Thornton, TX) has filed comments opposing the ARRL's request that the FCC declare that "Compliance with voluntary band plans constitutes good operating practice." Comstock says, "...If granted, the Request for Declaratory Ruling would constitute unlawful delegation by the Commission of its rule-making authority. The Commission has no authority under the Communications Act of 1934 to make such a delegation." He adds, "If someone 'establishes' a band plan, how can that be 'voluntary?'" He adds, "The ARRL is '...not the representative of amateurs in the U.S.' It would be kind to say that they only represent their members who constitute about 20 percent of the U.S. amateurs. But they do not even represent their members. During the survey taken by the ARRL of its membership in 1993, a majority of recipients opposed the establishment of sub-

bands. It can be assumed that these same amateurs opposed the establishment of band-plans. Which amateurs, then, does the ARRL represent when it tries to engage in diplomatic gyrations? ...Band-planning is the most ineffective method of utilizing the scarce frequencies allocated to the Amateur Service. The only requirement for the efficient use of the spectrum is "If the frequency is in use, don't use it." Strong comments indeed from someone who was an ARRL Director for 15 years!

■ The FCC's Compliance and Information Bureau has fined Jeffrey G. Guss, KF4MWT (of Palm Bay, FL) \$2,500 for causing intentional interference in 1997 to a business radio frequency and an amateur repeater network. The Palm Bay Police Department had informed the Bureau's Tampa District Office that a male individual regularly addresses the users of 154.6 MHz. using "foul" language, making threats, and generally causing "havoc" to the frequency.

Using direction finding equipment, the FCC's Tampa District Office tracked the source of the interference to Guss' home. In addition to his ham ticket, Guss also holds a business band (land mobile) license, KAF5993. He said he could not have caused the interference since he does not own a radio which could transmit on 154.6 MHz.

On August 25, 1997, the Tampa District Office received another complaint from the police dept. that someone was causing malicious interference to an amateur repeater used by the Palm Bay volunteer police force. The FCC agents traced the source of the transmissions on the repeater input frequency to a pick-up truck in motion. Mr. Guss was riding in the bed of the pick-up truck when it was spotted by the agents who recognized him from the previous inspection. He denied any knowledge of the transmissions.

Mr. Guss allowed the FCC agents to inspect two hand-held units. The first hand-held unit transmitted on amateur frequencies. The second hand-held unit transmitted on a frequency of 154.600 MHz. While performing the inspection of the hand-held units, one of the FCC agents noticed a radio antenna protruding from the back of a van parked across the street from the Guss residence which appeared to house a linear amplifier. Mr. Guss admitted owning the vehicle but refused to allow an inspection. He also did not respond to an official Notice of Violation.



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Prior to the No-Code Technician license, approximately 60% of all amateurs held a General, Advanced or Amateur Extra Class license. This percentage is now down to 43.1%. The table below shows that growth in many states continues to decrease dramatically! The No-Code Technician license continues to increase, however. There are now 11,550 more Code-less Techs (and 14,021 less amateurs holding a license class that requires Morse code) than a year ago.

## AMATEUR SERVICE GROWTH REPORT - SEPTEMBER 1997 vs SEPTEMBER 1998

STATE	EXTRA		ADVANCED		GENERAL		TECH PLUS		TECHNICIAN		NOVICE		TOTAL ALL CLASSES			% INCREASE		
	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998	1996	1997	1998	'96 %	'97 %	'98%
AL	1186	1218	1684	1666	1779	1730	2301	2239	3210	3418	825	701	10749	10985	10972	3.6%	2.2%	(0.1%)
AK	345	344	509	501	614	602	577	567	940	1030	357	329	3206	3342	3373	1.0%	4.2%	0.9%
AZ	1624	1672	2557	2543	2647	2634	3101	3063	4593	4876	1051	971	15165	15573	15759	3.8%	2.7%	1.2%
AR	787	800	1059	1057	1062	1051	1350	1328	2170	2292	526	480	6731	6954	7008	4.2%	3.3%	0.9%
CA	9031	9079	15377	14892	15796	15255	23084	22540	32271	34722	14700	13646	109124	110259	110134	1.7%	0.9%	(0.1%)
CO	1318	1357	2103	2098	2064	2043	2450	2471	2991	3229	1101	1004	11777	12027	12202	2.8%	2.1%	1.5%
CT	1144	1135	1488	1429	1836	1769	1826	1781	1627	1688	1559	1288	9453	9338	9090	0.2%	(1.2%)	(2.7%)
DE	207	211	235	226	283	276	337	336	300	312	168	144	1513	1530	1505	1.7%	1.1%	(1.6%)
DC	73	71	89	89	125	120	69	68	68	75	59	51	502	483	474	(4.7%)	(3.8%)	(1.9%)
FL	4584	4729	7869	7764	9261	9146	8386	8310	8009	8421	5829	5305	43726	43938	43675	1.3%	(0.5%)	(0.6%)
GA	1651	1680	2569	2532	2601	2566	3269	3254	3685	3942	1282	1180	14663	15057	15154	2.6%	2.7%	0.6%
HI	340	355	496	491	541	527	696	694	725	865	593	528	3420	3391	3460	1.2%	(0.8%)	2.0%
ID	365	384	602	603	712	720	803	812	1307	1451	327	305	3860	4116	4275	4.3%	6.6%	3.9%
IL	2706	2708	4013	3873	4572	4387	5081	4949	5405	5757	2919	2603	24802	24696	24277	0.5%	(0.5%)	(1.7%)
IN	1566	1570	2338	2302	2734	2672	3578	3497	3830	4088	1715	1565	15623	15761	15694	1.4%	0.9%	(0.4%)
IA	771	783	1388	1351	1424	1372	1238	1211	1361	1448	910	755	7137	7092	6920	0.3%	0.6%	(2.4%)
KS	765	761	1147	1118	1503	1481	1533	1526	1938	2003	846	744	7603	7732	7633	(0.1%)	1.7%	(1.3%)
KY	960	974	1220	1201	1448	1433	1860	1868	2632	2788	1025	950	8903	9145	9214	4.4%	2.7%	0.8%
LA	861	854	1300	1267	1320	1288	1475	1437	1774	1852	757	673	7530	7487	7371	0.2%	(0.6%)	(1.6%)
ME	516	524	691	691	1011	985	836	848	1043	1084	471	439	4516	4568	4571	2.4%	1.2%	0.1%
MD	1540	1552	2197	2149	2167	2068	2396	2397	2483	2595	1274	1151	12051	12057	11912	0.2%	0.0%	(1.2%)
MA	2119	2129	2613	2489	3188	3056	3293	3246	2861	3061	1977	1834	16140	16051	15815	0.2%	(0.6%)	(1.5%)
MI	2340	2383	3564	3467	4139	4041	4528	4489	5251	5588	2088	1908	21791	21910	21876	1.6%	0.5%	(0.2%)
MN	1221	1252	1975	1937	2219	2171	2164	2153	2456	2602	1046	934	11021	11081	11049	1.6%	0.5%	(0.3%)
MS	534	549	819	807	843	819	912	899	1357	1410	460	416	4795	4925	4900	3.8%	2.7%	(0.5%)
MO	1503	1518	2198	2131	2550	2500	2510	2489	3277	3494	1241	1125	13010	13279	13257	2.5%	2.1%	(0.2%)
MT	328	335	478	476	570	565	543	547	878	932	303	277	2952	3100	3132	4.3%	5.0%	1.0%
NE	408	415	758	733	932	904	813	812	821	899	398	357	4098	4130	4120	0.1%	0.8%	(0.2%)
NV	457	487	705	720	832	848	859	886	1266	1353	316	301	4215	4435	4595	5.6%	5.2%	3.6%
NH	705	716	741	736	940	909	1065	1054	1119	1207	494	461	4970	5064	5083	2.1%	1.9%	0.4%
NJ	2254	2247	3056	2929	3311	3177	3716	3633	3102	3242	2245	2040	17906	17684	17268	(0.6%)	(1.2%)	(2.4%)
NM	619	619	923	938	855	843	941	942	1634	1756	292	266	5155	5264	5364	3.2%	2.1%	1.9%
NY	3895	3843	5531	5323	6466	6234	7360	7182	7777	8185	5457	4850	36997	36486	35617	(0.8%)	(1.4%)	(2.4%)
NC	2029	2096	2930	2911	3091	3042	3655	3680	4907	5214	1837	1777	17830	18449	18720	4.4%	3.5%	1.5%
ND	163	158	242	237	362	344	349	341	397	429	192	174	1715	1705	1683	1.1%	(0.6%)	(1.3%)
OH	3311	3321	4841	4703	5423	5304	7740	7561	7741	8191	3418	3104	32195	32474	32184	0.9%	0.9%	(0.9%)
OK	978	1000	1481	1427	1427	1394	1933	1899	2822	2985	916	832	9417	9557	9537	3.5%	1.5%	(0.2%)
OR	1341	1365	2148	2123	2663	2616	2681	2685	3172	3410	1274	1154	13045	13279	13353	2.8%	1.8%	0.6%
PA	3155	3184	4377	4266	5010	4873	5461	5384	5111	5373	2926	2637	26003	26040	25717	0.3%	(0.1%)	(1.2%)
RI	365	358	353	342	503	492	620	600	435	459	352	303	2654	2618	2554	1.4%	(1.4%)	(2.4%)
SC	760	801	1101	1101	1345	1347	1416	1415	1624	1750	580	534	6624	6826	6948	3.8%	3.0%	1.8%
SD	184	189	308	299	357	342	287	277	343	376	147	139	1605	1626	1622	1.5%	1.3%	(0.3%)
TN	1593	1635	2327	2284	2309	2284	3244	3233	3690	3894	1228	1113	14114	14391	14443	2.9%	2.0%	0.4%
TX	5000	5084	7473	7370	7530	7353	8785	8742	10914	11579	3627	3254	42551	43329	43382	2.3%	1.8%	0.1%
UT	523	528	833	821	766	769	1742	1758	3514	3823	641	578	7567	8019	8277	6.8%	6.0%	3.2%
VT	268	280	327	312	422	410	427	417	623	663	195	183	2208	2262	2265	2.5%	2.4%	0.1%
VA	2190	2205	3039	2995	3036	2975	3523	3549	3888	4202	1724	1562	17133	17400	17488	2.0%	1.6%	0.5%
WA	2525	2556	3758	3679	4423	4347	5227	5166	6680	7039	2555	2301	24647	25168	25088	2.7%	2.1%	(0.3%)
WV	624	654	729	714	938	952	1300	1279	2213	2391	659	582	6230	6463	6572	2.9%	1.1%	1.7%
WI	1225	1247	1820	1805	2109	23045	2034	2034	2694	2896	1058	936	10773	10940	10963	1.9%	1.6%	0.2%
WY	188	195	234	230	291	278	313	310	468	506	161	142	1657	1655	1661	2.9%	(0.1%)	0.4%
GU	55	60	48	48	64	65	116	111	221	236	112	41	639	616	561	7.0%	(3.6%)	(8.9%)
PR	305	307	584	583	796	823	2381	2303	858	939	3811	3284	8850	8735	8239	1.8%	(1.3%)	(5.7%)
VI	53	50	51	50	80	75	58	56	75	83	38	27	369	355	341	2.9%	(3.8%)	(3.9%)
Other	133	133	102	120	124	129	150	164	427	425	62	66	903	998	1037	17.1%	10.5%	3.9%
97:	75681	113398	125414	148392	176978	81982	713833	721835	719364	1.8%	1.1%	(0.3%)						
%	10.5%	15.7%	17.3%	20.7%	24.5%	11.3%	100%	100%	100%									
98:	76660	110939	122461	146492	188528	74304	100%	100%	100%									
%	10.7%	15.4%	17.0%	20.4%	26.2%	10.3%												
% Inc.	+2.6%	(2.2%)	(2.4%)	(2.0%)	+6.5%	-(9.4%)												

("Other" includes U.S. small island possessions and APO/FPO addresses.)



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■ **Wireless rural telephone service moves into the Canadian 9-cm ham band.** In spite of protests from Canadian amateurs, *Industry Canada* (their telecommunications regulatory agency) has approved the allocation of spectrum within the 3300 to 3500 MHz Amateur Band for use by telephone companies in rural areas who wish to replace their copper wire transmission lines with wireless links or install new services. Such systems are referred to by the name *Fixed Wireless Access (FWA)*. The initial allocations will be in the 3400 - 3550 MHz range. U.S. amateurs along the border should be aware that FCC rule Section §97.303(l) preclude causing any interference to the new Canadian FWA systems. The number of amateurs in Canada making use of the 9-cm band is relatively small, but it will become more important as 3 GHz hardware becomes available and radio amateurs expand their development of spread spectrum communications. (Thanks, RAC)

■ **The following CEPT and non-CEPT countries participate in the CEPT (visiting) Radio Amateur License (T/R 61-01)** - Austria, Belgium, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Netherlands, New Zealand, Norway, Peru, Portugal, Romania, Slovak Republic, Spain, Sweden, Switzerland, Turkey and United Kingdom.

CEPT is the *European Conference of Postal and Telecommunications Administrations*. In September 1997, the U.S. State Department applied for U.S. participation in CEPT's temporary (visiting guest) licensing system which was approved at a CEPT meeting this past January. The CEPT arrangement permits reciprocal amateur radio operator licensing by visiting amateurs without the need to apply for a reciprocal permit. The FCC is currently in the process of implementing this arrangement. CEPT recognizes only two license classes. The CEPT Class 2 license (which is similar to our Technician Class) yields full privileges above 30 MHz. The CEPT Class 1 license allows full privileges on all Amateur Service bands. It has been decided that the FCC-granted Technician Plus (which requires 5 WPM code proficiency) and higher class licenses would qualify for the CEPT Class 1 full privilege license.

## Guest Editorial - COURAGE HANDI-HAMS SYSTEM

Handi-Hams is a national organization of handicapped amateurs. The following was adapted from an editorial written by Patrick Tice, WA0TDA, Manager, Courage HANDI-HAM System (CHHS), 3915 Golden Valley Road, Golden Valley, MN 55422, <handiham@courage.org> that appears on their website at: <<http://www.mtn.org/handiham/hhwf98/editorial.htm>>

WA0TDA adds, "In a nutshell, our opinion is that any code requirement is on shaky ground in the event of a legal

challenge by a disabled person. The rationale is that testing must mirror real-world skill requirements, and that fast code is no longer an "essential" skill for HF operation.

Simplification of the amateur radio licensing structure is long overdue. There are eight separate test elements, which, when added to the vanity callsign licensing applications, make for a great deal of paperwork. There are economies to be gained by the reduction of paperwork, and the Courage HANDI-HAM System (CHHS) supports action to streamline the licensing structure by eliminating the Novice and Technician Plus Class licenses.

The CHHS has seen a steady decline in members holding Novice licenses and will soon be dropping its special classification within our own files. Our experience parallels that of the ARRL, which points out that the Technician Class No-Code license is the de facto entry-level license and that there is little or no interest in the Novice license.

The FCC's NPRM seeks comment on code testing. In keeping with our views above, we feel that any move toward eliminating unnecessary elements will contribute to the overall streamlining of the licensing structure and will reduce paperwork accordingly. While everyone agrees that less paperwork is desirable, the amateur radio community is more focused on whether or not code should be retained as a test element at all, and, if it is, at what speeds must applicants be tested.

This has proven to be a more contentious point than the overall simplification of the licensing structure. There are strong opinions on both sides of what has become an exceptionally polarized argument between pro-code and no-code activists.

Complicating the discussion on code is the issue of the Morse Code Disability Waiver. When the concept of excusing the testing for fast code proficiency by persons with disabilities first was suggested, the CHHS took a position against the disability waiver. Nonetheless, the waiver was written into FCC rules, and was freely - perhaps too freely - used by many applicants whose disabilities were little or no impediment to learning or using the code at any speed.

In response to these obvious abuses, the ARRL proposed a system whereby physicians' statements would be shared with VEC's when applicants with disabilities claimed the waiver. The FCC rejected this proposal, citing confidentiality and issues of undue procedural burdens on applicants with disabilities. We agree with the FCC on this, but also understand the necessity of dealing with abuse of the Morse Code Waiver. The waiver is a necessity for persons whose disabilities truly prevent them from using fast code, but the entire question of the waiver needs to be examined in the context of communications for the Twenty-First Century; to wit: Is code proficiency a necessary and elemental skill for communicating on the



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high frequency bands?

The Amateur Service stands alone as a user of Morse Code in regular worldwide high frequency band communications. Virtually every other service has moved on to digital modes or voice communications. We view this as a far more reliable indicator of code's true utility than the arguments about code "getting through when other media cannot."

Our assessment of the situation in 1998 is that while code is fun to use and retains a following in the amateur community, it is no longer essential to H.F. communications, adding little to the overall reliability of data transfer and nothing to an advance in the state of the art of H.F. communications. Following this line of reasoning, we must conclude that code testing should be phased out of the amateur service as irrelevant to real-world H.F. communications practice.

Removal of code testing requirements would obviate the need for a waiver, and the entire concept of a disability waiver could be put to rest. As it now stands, FCC rules mandate fast code testing for General and Extra Class licenses. Our feeling is that, should a person with a disability challenge this requirement as irrelevant and arbitrary in light of the movement of all other H.F. services away from code, it would be impossible to defend fast code testing and the requirement would be vacated.

In other areas of society, irrelevant testing material and procedures have been stricken down as illegal time and time again. For example, municipal fire departments cannot exclude applicants on the basis of their inability to perform push-ups, because push-ups are not a real-world skill in fighting fires. Similarly, if Morse is no longer a real-world requirement for H.F. operation, we should no longer be testing for it.

While many of us in the CHHS sympathize with those who would retain code testing, the fact of the matter is that such testing excludes persons with disabilities who could otherwise be able H.F. operators, and does so on the basis of what has become a fully arbitrary requirement in the light of current trends in technology. We should also point out that an adapted testing procedure is not an apt substitute for people whose disabilities include hearing loss and limited motor control.

The truth is that even if these applicants pass an adapted test most will never actually use the code, yet they are being forced to comply with a procedure that would not even exist if testing in the amateur service tracked real-world skills. Furthermore, some of these folks cannot even pass the 5 word-per-minute test without heavy "adaptation," opening the door for charges of preferential treatment, abuse of the adaptive testing process, and sneering put-downs about "no-code Extra Class licensees" when such persons move through the licensing levels, either with the waiver or through heavily adapted

code testing.

We believe that VE teams are not in a position to adapt tests to every disability, nor should they have to. They are not physiologists or audiologists and cannot be expected to understand adaptive methodology. Adaptive procedures in other areas of endeavor follow careful, individualized assessment. It is absurd to expect amateur radio volunteers to do this job with no training and no set procedures.

However, if fast code is retained as an essential test element, the FCC proposes to retain a disability waiver. In this event, the CHHS agrees with the ARRL that applicants should attempt an adapted test prior to waiving out of the fast code elements. We have reservations about the choice and level of adaptation allowed, and believe that allowing VE teams to make such decisions with no guidelines keeps the door open to all of the abuses in code testing that have been observed in recent years.

As noted in the preceding paragraph, it will be difficult for the VE teams to assess applicants with disabilities in the field, and they could, in effect, find themselves in the uncomfortable position of second-guessing the applicant's physician. The VEC should provide adaptive testing guidelines to assist VE teams in the field if the fast code requirement is retained.

The NPRM states: "In light of the fact that written examinations now have been prepared and administered under the VE system for over a decade, we seek comment on whether the written examination requirements should be modified to provide VE's and VEC's additional flexibility in determining the specific contents of written examinations, on the specifics of what such flexibility should entail, and on the advantages and disadvantages to providing such flexibility."

The CHHS feels that the one place in VE testing that additional flexibility has been tested, namely in code testing, there has been abuse, carelessness, and an arbitrariness that is fundamentally unfair. To expand the duties of the VE's in the field to include manipulation of other test elements is, in our opinion, unthinkable. The current method of producing computer-generated tests is both fair and well within the capabilities of volunteers in the field.

We at the CHHS believe that restructuring of the Amateur Service will help the service move into the twenty-first century.

Finally, none of this means that the Courage HANDI-HAM System will cease to support code usage on the amateur bands. Even if the code requirement is dropped entirely, we will continue to promote code as a useful, enjoyable mode of communication and will support its teaching in our program. What will change is that our members will decide for themselves whether or not code is a mode that they wish to learn and use, as they would learn and use any other mode of operation.